

**U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
2015 Gold King Mine Release SITREP**



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 8**

Subject: SITREP #3
Gold King Mine Release

San Juan County, Colorado
Latitude: 37.8945 Longitude: -107.6384

To:
Thru: David Ostrander, Regional Incident Coordinator
From: R8 IMT Situation Unit
Date: 08/08/2015
Reporting Period: 08/07/15 through 08/08/15

All highlighted sections are unique to this document.

Executive Summary

On August 5, 2015, EPA was conducting an investigation of the Gold King Mine. The intent of the investigation was to create access to the mine, assess on-going water releases from the mine to treat mine water, and assess the feasibility of further mine remediation. The plan was to excavate the loose

material that had collapsed into the cave entry back to the timbering. During the excavation, the loose material gave way, opening the adit (mine tunnel) and spilling the water stored behind the collapsed material into Cement Creek, a tributary of the Animas River.

Initial estimates are that the release contained approximately one million gallons of water (estimated from the dimensions of the mine adit) that was held behind unconsolidated debris. There were several workers at the site at the time of the breach, all were unharmed.

The large pulse of water dissipated in about an hour. The water in Cement Creek and the Animas River in Silverton is clearing. The adit is still discharging lower flows into Cement Creek.

We expect conditions will continue to improve in the coming hours and days. As of 10 am today, the leading edge of the plume was at 8 miles, as the crow flies (not river miles), from the New Mexico state line. We expect an update on that location later this afternoon.

1. Introduction

1.1 Background

Site Number:	Contract Number:
D.O. Number:	Action Memo Date:
Response Authority: CERCLA	Response Type: Emergency
Response Lead: EPA	Incident Category:
NPL Status:	Operable Unit:
Mobilization Date: 08/05/2015	Start Date: 08/05/15
Demob Date:	Completion Date:
CERCLIS ID:	RCRIS ID:
ERNS No.:	State Notification: 08/05/15

1.1.1 Incident Category

1.1.2 Site Description.

1.1.2.1 Location San Juan County, Colorado, and La Plata County, Colorado.

1.1.2.2 Description of Threat

Approximately one million gallons of mine waste water was released into Cement Creek and the Animas River. The primary environmental concern is the pulse of contaminated water containing sediment and metals flowing as an orange-colored discharge downstream through Durango, Colorado, and into New Mexico and Utah. The City of Durango relies on the Animas River as one of its water sources - the Animas source is off-line, and they are continuing to provide clean drinking water to the City. The river is also used for recreational purposes, including fishing and rafting. At the confluence of the Animas River and the San Juan River in New Mexico, there is a designated critical habitat for the Colorado Pike Minnow fish and the Razorback Sucker fish.

The pulse of water passed through Durango, Colorado, in the late afternoon on Friday, August 7, 2015, and in the late afternoon on August 8, 2015, it crossed the border into New Mexico.

1.1.3 Preliminary Site Inspection Results

Water sampling has occurred (analytical results are pending), and pH levels and other water quality parameters are being monitored.

1.2 Incident Objectives

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The incident overall objective is to protect the drinking water supply of the City of Durango, Colorado, and others who may be using the river for various purposes.

Divert adit discharge and begin water treatment.

1.3 Critical Resource Needs

No information available at this time.

1.4 Strategic Considerations

No information available at this time.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

Water quality sampling has occurred and results are pending. OCSs have been deployed to the area. EPA Region 8 staff are coordinating with relevant county/city/tribal officials.

2.1.2 Response Actions to Date

Water quality sampling was initially conducted by EPA Region 8 staff, and on Thursday, August 7, 2015, START began taking samples, as well. EPA Region 8's lab in Golden, Colorado, and a local lab in Durango, were being used to analyze the samples. A lab in Savannah, GA, will be used moving forward.

The pH was measured at a number of locations along Cement Creek and the Animas River to Durango and beyond to Farmington, New Mexico. Except for locations within Cement Creek, generally, pH levels were measured before the arrival of the contaminant plume and found to range between 6.5 and 7.6. When the contaminated water from the mine release passed a sampling location, the pH lowered (indicating more acid) to approximately 4.8 (below Silverton). A pH of 4.5 is consistent with the pH of a liquid like black coffee. Later, however, in locations down river, the pH began to return to pre-incident levels. Water acidity levels in the Animas above Cement Creek have been consistent over the past two days at approximately 6.4 to 6.8. For reference, the pH of saliva is roughly 6 and the pH of pure water is 7. The acidity level in Cement Creek has remained low at 3.74 since the mine release. Tomato juice and apples also have a pH of approximately 3.74. While this reference information is relevant to skin exposure, the evaluation of impacts of these pH levels on fish and other aquatic life is ongoing.

Meetings were held with San Juan County, Colorado, officials, and La Plata County, Colorado, officials on Wednesday, August 6, 2015. ATSDR consulted with San Juan County, Colorado, with them on personal safety issues for people potentially affected by the contaminated water. ATSDR additionally released talking points for public communications.

The EPA Region 8 Regional Administrator and Removal Manager met with LaPlata County and City of Durango officials on August 7, 2015, and held a public meeting.

EPA Region 8 staff met with the Durango City Engineer to analyze and implement measures to protect the Durango drinking water supply.

ASPECT arrived in Santa Fe, New Mexico, on August 6, 2015. They completed a preliminary overflight to determine how far downstream the release had travelled. On the morning of August 7, 2015, ASPECT flew over the river from the New Mexico border to the mine. They determined that the leading edge of the release was 8 miles from the New Mexico Border at 10a.m., and provided photographs of the affected areas of the Animas River. An additional flight was completed in the

late afternoon.

EPA Region 8 is coordinating on the incident with EPA Regions 6 and 9, the States of Colorado, New Mexico, and Utah, and the Navajo Nation and Southern Ute Tribes.

A call was held with the Regional Response Team on Friday, August 7, 2015.

EPA began building settling ponds to treat the discharge from the audit. An upper pond was completed by early afternoon, and a lower pond by ????. EPA will treat the mine water diverted to the ponds with caustic soda and flocculent. The discharge flow rate from the mine was confirmed ???.

The EPA Region 8 Regional Administrator and the Regional Incident Coordinator flew to Durango, Colorado, on August 7, 2015, and met with the OSCs and local officials, toured affected sections of the Animas River, and attended a public meeting on the incident.

Baseline water quality data from the past 17 years has been obtained, and was compared with the new water quality data that became available on August 7, 2015.

2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)

2.1.4 Progress Metrics

2.2 Planning Section

2.2.1 Anticipated Activities

The Planning Section's Situation Unit stood up on 08/06/2015 in the EPA Region 8 REOC. SITREPS will continue to be prepared until it is determined that they are no longer necessary.

ASPECT ...

EPA is rebuilding settling ponds to treat these flows – the upper pond will be completed by early afternoon, and the lower pond by COB or early tomorrow. EPA will treat the mine water diverted to the ponds with caustic soda and flocculent once the ponds are built.

Sampling crews have been and will be sampling locations from Silverton (and above Silverton, near the Mine), all the way to the Colorado border, a distance of approximately 60 miles. Crews will also sample in New Mexico. The distance between sampling locations involves driving time, especially where sampling locations on the river are in remote, difficult to access locations.

Samples are taken from the river using a hand pump or peristaltic pump. Samples must be filtered. Once at the location, collecting the sample may take ½ hour or more.

The standard procedure for analyzing for metals requires a 16 hour hold time with the preservative. EPA will be modifying this procedure to reduce or eliminate this hold time.

The samples must then be transported to a laboratory, either hand-delivered or shipped. The turnaround time for laboratories is different depending on the number of personnel available and number of instruments available. Small labs may only be able to guarantee a 24-48 hour turnaround time. Medium and large capacity labs will be able to provide much faster turnaround



times and sometimes even same day results. EPA is currently using a local laboratory in Durango; which has been extremely cooperative and plans to work through the weekend for this project; however, it is a small capacity lab and will likely not be able to process the high volume of samples anticipated to be taken. EPA is exploring options for procuring another lab, which will involve driving or shipping samples for delivery.

We will continue to coordinate with local, state, tribal and federal officials.

EPA Region 8 is coordinating with ATSDR in response to public health concerns/questions associated with the mine waste plume. ATSDR has been in communication with local health officials at San Juan County Basin Health Department in Colorado. Public health questions/concerns should be directed to Chris Poulet, ATSDR/R8 at 303-312-7013.

EPA Region 8 is coordinating with EPA Regions 6 and 9, the states of Colorado, New Mexico, and Utah, and the Navajo Nation and Southern Ute Tribes. Region 6 is working closely with the New Mexico Environment Department (NMED) to evaluate possible impacts in New Mexico. Region 9 is working closely with the Navajo Nation Emergency Response Coordinator to evaluate possible impacts to the Tribe. Potentially impacted water systems have been notified, and precautions are in place to ensure drinking water in homes is protected. EPA and NMED are providing assistance to community water systems and closely monitoring the situation.

2.2.1.2 Next Steps

2.2.2 Issues

2.3 Logistics Section

No information at this time.

2.4 Finance Section

2.4.1 Narrative

Stood up on August 7, 2015.

Mission Number	Mission Assignment Description	Funding Amount (in thousands)	Status

2.5 Other Command Staff

2.5.1 Safety Officer

2.5.2 Liaison Officer

2.5.3 Information Officer

A press release was prepared, and a public meeting was held on August 7, 2015.

2.5.4 Weather Forecast

Weather forecast for Saturday, August 8, 2015:

3. Participating Entities

3.1 Unified Command

3.2 Cooperating Agencies

The Colorado Fish and Wildlife Conservation Office is monitoring effects on wildlife and aquatic life in the affected area.

The La Plata County Sheriff issued an order closing the Animas River to all watercraft from the north County line (San Juan County, Colorado) to the south County line (at the Colorado/New Mexico State line) until further notice. Furthermore, all such watercraft must be removed from the Animas River within the locations cited above. The decision was made after consultation with the EPA, CDPHE, the San Juan Basin Health Department, and representatives of the Southern Ute Indian Tribe. The Order will remain in effect until it is determined that the river is safe.

EPA Region 8 has contacted the US Fish and Wildlife Service and the US Department of Interior about the incident, and is working with the US Geological Service on water flow data in the Animas River.

4. Personnel On Site

Gold King Mine Release 2015	
	08/08/2015
Group	Number
EPA @ REOC	13
Contractors @ REOC	2
EPA in Field (R8)	5
Contractors in Field	Several (count TBD)
WERT Reg 8	0

5. Definition of Terms

No information available at this time.

6. Additional sources of information

No information available at this time.

7. Situational Reference Materials

No information available at this time.